

## Patent Claims

1.-12. (cancelled)

13. (new) A method for transmitting variable-length packets over connections which are established between communication devices of a communication system, the method comprising:

providing a marker within the header of a packet, wherein the marker identifies a subset of total number of packets transmitted per connection which are used for operating and/or maintaining the network, wherein

the communication devices to form a network.

14. (new) The method according to Claim 13, wherein the packets are transmitted in accordance with a Multi Protocol Label Switching (MPLS) transmission procedure, wherein these packets being defined as MPLS packets, and wherein the MPLS packets with the marker are defined as MPLS-OAM (operating and maintenance) packets.

15. (new) The method according to Claim 13, wherein one of the EXP bits in the header of the MPLS packet is used as the marker.

16. (new) The method according to Claim 14, wherein one of the EXP bits in the header of the MPLS packet is used as the marker.

17. (new) The method according to Claim 13, wherein one of the reserved MPLS label values No. 4 to No. 15 is used in the header of the MPLS packet as the marker.

18. (new) The method according to Claim 14, wherein one of the reserved MPLS label values No. 4 to No. 15 is used in the header of the MPLS packet as the marker.

19. (new) The method according to Claim 13, wherein

an end-to-end MPLS-OAM packet flow is formed from the MPLS-OAM packets which is transmitted between source and sink of the connection, wherein

the entire connection is monitored.

20. (new) The method according to Claim 14, wherein

an end-to-end MPLS-OAM packet flow is formed from the MPLS-OAM packets which is transmitted between source and sink of the connection, wherein

the entire connection is monitored.

21. (new) The method according to Claim 15, wherein

an end-to-end MPLS-OAM packet flow is formed from the MPLS-OAM packets which is transmitted between source and sink of the connection, wherein

the entire connection is monitored.

22. (new) The method according to Claim 13, wherein

the connection is formed from a plurality of segments, wherein an MPLS-OAM segment flow is formed from the MPLS-OAM packets which is transmitted within the segment of the connection concerned between source and sink of the segment, and wherein this segment of the connection is monitored.

23. (new) The method according to Claim 14, wherein

the connection is formed from a plurality of segments, wherein an MPLS-OAM segment flow is formed from the MPLS-OAM packets, wherein the MPLS-OAM segment flow is transmitted, within the segment of the connection, between source and sink of the segment, and wherein this segment of the connection is monitored.

24. (new) The method according to Claim 22, wherein different variants of an MPLS-OAM segment flow exist which are defined as Type A, Type B etc. and which can be set up to be functionally independent of each other for the same connection.

25. (new) The method according to Claim 19, wherein only one MPLS-OAM segment flow of the same, but a number of MPLS-OAM segment flows of different variants can be simultaneously created for any given segment of the connection.

26. (new) The method according to Claim 13, further comprising:  
providing a second marker within an MPLS-OAM packet to indicate whether the MPLS-OAM packet is part of an end-to-end MPLS-OAM packet flow or part of an MPLS-OAM segment flow.

27. (new) The method according to Claim 14, further comprising:  
providing a second marker within an MPLS-OAM packet to indicate whether the associated MPLS-OAM packet is part of an end-to-end MPLS-OAM packet flow or part of an MPLS-OAM segment flow.

28. (new) The method according to Claim 13, further comprising:  
providing a third marker within an MPLS OAM packet to indicate the variant of the MPLS-OAM segment of the MPLS-OAM packet.

29. (new) The method according to Claim 13, further comprising:  
providing a fourth marker within an MPLS-OAM packet which identifies the functional significance of the MPLS-OAM packet in greater detail.

30. (new) The method according to Claim 13, further comprising:  
transmitting further information within an MPLS-OAM packet, wherein this information is used to support operation and maintenance of the network.